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Social Knowledge for Financial Markets Soziales Wissen für Finanzmärkte

Financial literacy is an important issue today, but it is directed/limited to improve the practical skills of people taking financial markets and their present working for granted. However, financial markets are social institutions and social processes involving network relations as well as rules and norms. Globalization has resulted in a dominating role of financial markets over the economy with importance for the transformation of capitalistic society. The sociological perspectives on financial markets have relevance also for the present crisis for which several explanations have been suggested. Most explanations overlook, however, the process of disembedding of the financial markets from the societal context, which is represented by the reliance on a specific kind of knowledge. To illustrate the need for reintegrating financial markets in the economy and making them more responsive to societal concerns, financial knowledge requires to be embedded into social knowledge about the function of financial markets for society, the importance of norms and the social character of markets.

Finanzerziehung ist ein wichtiges Anliegen in der Gegenwart, aber die "finanzielle Alphabetisierung" beschränkt sich auf die Vermittlung praktischen Wissens, ohne die Finanzmärkte und ihr Funktionieren zu hinterfragen. Aber Finanzmärkte sind soziale Institutionen und soziale Prozesse, die Netzwerkbeziehungen sowie Regeln und Normen umfassen. Die Globalisierung resultierte in einer dominierenden Rolle des Finanzsystems im Verhältnis zur Wirtschaft und mit Implikationen für die Transformation der kapitalistischen Gesellschaft. Die soziologischen Perspektiven auf Finanzmärkte sind auch für die gegenwärtige Krise relevant, die verschieden zu erklären versucht wird. Diese Erklärungen übersehen jedoch vielfach den Prozess der Entbettung der Finanzmärkte aus den gesellschaftlichen Kontexten, der sich auch durch die Betonung einer spezifischen Art von Wissen darstellt. Um die Notwendigkeit für die Reintegration der Finanzmärkte in die Wirtschaft und für ihre Verantwortlichkeit für gesellschaftliche Belange verständlich zu machen, bedarf es der Einbettung des finanztechnischen Wissens in soziales Wissen über die Funktion der Finanzmärkte in der Gesellschaft, die Bedeutung von Normen und den sozialen Charakter von Märkten.

Keywords:

Economic sociology, embeddedness, diffusion effects, financial crisis, financial market capitalism, financial literacy, performativity, uncertainty, social networks, social knowledge.

Markets, crisis and financial literacy

The decades before the outbreak of the financial crisis of 2007/8 and the ensuing economic recession in great parts of the world had witnessed a huge expansion of the global financial transactions and the consequent dominance of the financial markets over the rest of the economy. Financial markets became the primary global arenas of economic activities and involved also larger strata of the population in the US and in Europe directly or indirectly. This raised awareness of the need to improve financial knowledge among the public at large. "Financial literacy" programs were set up by governments of countries like the US, UK and Australia and by inter-governmental projects of the OECD resulting in the establishment of the "International Gateway for Financial Education" in 2008. The crisis provided additional cause for these initiatives because of the high percentage of consumer and household debts, the rise in insolvencies, the irrational actions of investors and the deceptive or fraudulent behaviour by financial intermediaries. Its dismal

effects aside the crisis has led to a heightened awareness that the expansion of the worldwide financial transactions have not been equalled by a corresponding increase of financial knowledge among the public at large. Financial literacy education has become a great political issue and is promoted by states, universities and financial institutions; it has attracted also the consulting business and seems to develop into a special market for educationists.

Financial literacy is understood as the ability to manage one's money affairs. According to an OECD publication "Financial education is the process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to got for help, and to take other effective actions to improve their financial well-being." (OECD 2005, 26).

The emphasis of the programs is on basic pragmatic questions of consumer finance and on empowering people to match their expenses to income, to plan financial affairs according to life circumstances, to handle credit, insurance and retirement planning etc. The programs do not aim at furthering a broader understanding of the world of finance, even much less raising doubts regarding the rationality or legitimacy of the present working of financial markets. Therefore, the critique of financial literacy education blames it as "an attempt at social engineering, trying to change not only consumers' skills, but their thought processes, feelings, motivations, and ultimately their values" (Willis 2008, 285). It is criticized that the financial ability programs take the rationality of the market for granted and divert attention from necessary market regulations to the responsibility of customers.

In the following an attempt is made to introduce some sociological insights into the understanding of financial markets and to enlarge financial education by including "social literacy" as a different perspective on markets and economic action. This leads also to looking at the financial crisis from different perspectives and to draw attention to the need to complement or counteract the kind of financial knowledge that is produced by an understanding based on knowledge of the social character of economic processes.

Sociological perspectives on financial markets

In economics money and markets are not explained, but are taken for granted. The market is expressed by relating aggregate demand and supply, while money, devoid of its symbolic and social meaning, is reduced to its quantitative form. While mainstream economics has treated uncertainty as an irritating occurrence that disturbs the perfect market model, heterodox economists as well as economic sociologists recognize uncertainty as a fundamental characteristic of markets which cannot be converted to risk by introducing probability measures (e.g. Springler 2009). Uncertainty is reduced, however, by social structural and institutional ordering of market relations.

From a sociological perspective money takes on the meaning of a basic bond of society and can be defined as the social contract of modern society (Paul 2004, 222). Markets are seen as interactions between actors in the context of social situations that involve a range of different aspects, among them competition for scarce resources; they are understood also as institutions socially constructed by attributing meaning and function to them within a certain societal context; especially financial markets may be additionally defined as social fields in which people with different interests, status and power fight for the appropriation of profit (Godechot 2008). In all these definitions markets do not figure as self-steering mechanisms of prices and quantities of goods and money, and even financial markets, which often are understood as the most typically perfect markets, are defined as social systems or social fields where people interact with one another.

Money and finance were well represented in classical sociology: Georg Simmel looked into the preconditions and consequences of money for culture, social relations and the psychology of individuals, and Max Weber, who had done an early study on stock exchanges (Weber 2000; Mikl-Horke 2010), had reflected on the cultural meaning of money, markets and capitalism. But after that for many decades markets and especially financial markets were not touched upon by sociological research. Since the 1980s, however, economic sociology has gained a new impetus as the empirical study of markets and economic action (e.g. Mikl-Horke 2008, 114). It focuses preferably on the intermediate level between the state and the individual behaviour, i.e., on social relations and networks between individual actors, groups and organizations, and on the values and norms which emerge or are interpreted and put to effect in the course of social interactions in markets.

Social relations in financial markets

While economic theory takes into consideration only the purely economic rationality of individual market actors involved in exchange and competition, the economic sociological studies emphasize the "embeddedness" of economic action in social networks (see especially Granovetter 1985; White 1981). The social motives like the quest for recognition and reputation, the need for belonging and for trusting, the striving for power, and the orientation at values and norms are present also in market interactions and affect the economic outcome. They may be utilized as social capital instrumental for economic success, but they may be valued also for their own sake. In any case, however, they influence market behaviour and are in existence wherever people have to deal with one another, whether as market participants, or in other situations and financial markets are no exception to this

Financial markets comprise all the many different interactions of selling, buying, saving, borrowing and investing money and capital. They are enacted on stock exchange floors, by electronic means, over the counter or behind closed doors, and they consist in localized dealings or in transactions over wide distances. A characteristic of financial markets is the great importance of intermediaries like banks, investment-, hedge- and pension funds, financial consultants and brokers on the stock exchanges and their relations with their clients on either side of the market. The individuals representing the intermediary institution act on behalf of their clients, but they have also their own interests and their principal's interests to consider. The relations between intermediaries and their clients are often asymmetrical relations characterized by differences in information, knowledge, power and influence, sometimes also in status and reputation. When the relations last over a longer period, there develop personal ties between the market actors themselves as well as between the intermediaries

and their clients. The longstanding relations between banks and enterprises belonging to the same network of firms in Japan and their basis in capital as well as personal ties has been an object of many studies (e.g. Abegglen, Stalk 1985, 214; Granovetter 2005). But also on stock markets special ties develop between professional market actors, and between them and some of their clients resulting in the special treatment of clients with large portfolios by stock exchange brokers passing on information which is not yet publicized to them. Baker has shown that in stock exchanges a "paradox of large numbers" (Baker 1984, 804) occurs which contradicts the neoclassical assumption that expansion of the market leads to an increase in competition. As the number of traders and brokers in the capital market increases, a decrease in competition has been observed because of collusion between the actors on the basis of their personal ties. Thus, also in the core area of financial markets there are social network relations in effect shaped continuously by the concrete ongoing interactions and, in their turn, influencing economic decisions and outcomes (see Orlean 1990).

Financial markets are embedded into society, but they are themselves distinct social systems and constitute specific social and cultural worlds (see Knorr-Cetina 2010). The behaviour of financial market actors is demonstrated most spectacularly in floor trading in stock exchanges where co-presence makes possible observation of others and exchange between actors by signs. Since they deal with time and money under conditions of uncertainty, expectations as to the actions of others play a great role resulting in an interdependence of expectations (Mieg 2007, 220). On top of these actors on stock exchanges commit themselves to this special environment, take positions in it and make promises; the seemingly typical exchange market based on a multitude of isolated transactions is actually a "nexus of engagements" (Knorr-Cetina 2010, 341). Technical means of communication and handling transactions change the situation by including artefacts (Kalthoff 2010, 274). Even under the condition of electronically mediated transactions which transform stock exchanges into "markets-on-screen" (Knorr-Cetina 2005, 48) social and personal ties play a great role. The real time transactions across the globe made possible by the Electronic Brokerage System (EBS) reveal what aptly has been called "global microstructures" between actors (Knorr-Cetina/Brügger 2002).

Apart from the existence of network relations in financial markets also the content and the quality of the relations is important. There are competing views on how network relations in the economy affect transactions. On the one hand, there are those that see them as conducive to collusion or even to criminal actions like insider trading or downright fraud. On the other hand, economic sociologists have placed emphasis on the beneficial role of social network relations for the improvement of outcomes, for example, when they increase the chance for loans on good conditions for long standing bank clients (Uzzi 1999), or in the sense of providing protection against information asymmetry and opportunism (Baker, Faulkner 2004). The investor can get information about the reliability of potential transaction partners or about new investment possibilities through his/her network relations. Previous contacts with business partners can reduce the incidence of fraud or deceit, but networks may also widen the circle of possible victims of opportunistic behaviour and increase the possibility of losing one's capital. In their research Baker and Faulkner showed that the negative role of socially embedded ties pertains to transactions undertaken for the sole purpose of committing fraud. Illegal practices like preferential treatment of investors are done also in order to keep the social ties intact, but in general, preexisting social ties proved protective and beneficial (Baker, Faulkner 2004, 105).

The social and personal relations in financial markets concern the diffusion of information, the building and keeping up of trust between the partners and of confidence in the market or the financial system. Longstanding social and personal relations provide channels of communication through which information is passed on. They provide also the concrete experiences in which trust in fair transactions and confidence in the system are formed. Trust and confidence are especially important in financial transactions because money affairs are critical issues for most people and because uncertainty is high in financial markets. As Beckert has shown, trust is not something one has or has not, but is itself a relation between the trustgiver and the trust-taker (Beckert 2002). Since the fundamental characteristic of markets is uncertainty as to the actions of the other market participants, the former can develop a trusting attitude only based on some accommodating signals in the latter's self-presentation. Personal trust can be seen in this way as an exchange of signals that leads to mutual understanding of the situation.

People enter financial marketplaces with a certain attitude of confidence or belief or also with reserve and caution; this may pertain to the workings of the market as such or the underlying system of regulations and policies. They may trust or distrust the objectivity and correctness of the data presented to them, the general fairness of dealings, the honesty of the professional actors, but these attitudes and opinions are based ultimately on concrete experiences involving personal and social relations and are put to the test each time the individual engages in such transactions. Problems arise when the norms and values of the agents in the financial world differ from those of the public they are supposed to serve.

Financial markets as social institutions

Financial markets rely on social relations, but also on rules and norms, and the freer the market is the more it depends on those rules that are based on commonly shared values and beliefs. Also in financial markets where the long-range financing interests of enterprises meet the short-range interests of investors (Grzebeta 2007, 138), inter-subjective understandings on the appropriate prices and practices develop in the course of transactions.

This allows the formation of expectations as to the actions of others and foreseeing the consequences of one's own behaviour. The same function is fulfilled by the evolution of routines and the tacit acceptance of conventions in the course of prolonged interactions. Routines, conventions, rules, and norms serve an important function in markets because they make behaviour more predictable and thereby reduce uncertainty (Beckert 1996, 827). Financial markets are institutions in this sense of constituting complexes of norms that imply a differentiation of roles and result in complementary patterns of behaviour.

In recent social science studies the informal rules and norms that emerge from the interaction processes themselves have attracted much attention. The ties existing between banks and firms or the rules and conventions emerging between traders and brokers on stock exchanges influence their actions and shape expectations, thus, resulting in informal norms. Among the professional actors in financial markets norms of rational, correct and fair behaviour develop in order to keep up the status of the profession and the order of the system; to this end they are connected with sanctions on deviant actions. They include also norms of behaviour towards clients and the public which are important for keeping up reputation and confidence. Rules and norms, thus, emerge from the continuous operations of markets because of the interest of market actors in durable relations and in the continuous existence of the system. The routines and common standards of behaviour that are formed in situations constitute specific market cultures with their own "local rationality" (Abolafia 1998, 83). This often demands curtailing the individual profit striving by compromising, renouncing, postponing of actions in the interest of keeping up good relations, earning or retaining respect and reputation, staying engaged in the market as one's long-time business community etc.

Although the market actors pursue their own interests and those of their principals or clients, they usually also recognize the importance of cooperation and of observing certain rules that ensure the working of the system. Therefore, norms that support the effectiveness of long-term operations do not stand in sharp contrast to the individual economic interests as long as he/she values staying in business, belonging to the professional group and enjoying good reputation which has been shown in a study among traders on Wall Street who acted on the basis of both norms and interests (Abolafia 1996). But norms are not only instrumental for reducing uncertainty and ensure the order of the market because social norms influence also the formation of interests of the individuals living in a certain societal and cultural environment. Swedberg emphasizes, therefore, that interests are formed within a social system and are not purely individual; as far as they are considered legitimate they are socially viable individual aims (Swedberg 2003, 290).

Norms that are effective in financial markets emerge informally and may then become formalized, but they are also formally introduced by an external authority to ensure the freedom or the order of the market, to avoid the risk of disruption by opportunistic behaviour or by unfair or illegal practices that could destroy public confidence in the system. Moreover, the working of financial markets must comply with the normative system of society which is determined by many different goals and concerns. Financial markets are institutions of the society, a view which emphasizes their integration into and coherence with the larger social, political and cultural environment.

Societies depend very much on the economy as the material basis of life and well-being of their members. Economic interests and societal values and norms are normally not opposed to one another as is often implied. The normative fabric of market society includes the valuation of economic rationality as long as it is not disruptive of communal interests and hence can be considered as legitimate. But in a society there are other concerns that must equally be taken into account for their own sake like health, education, social security etc., so that a society must satisfy and balance many different goals which cannot be reduced to that of economic growth and efficiency of the business sector alone as the one and only factor able to realize all those goals. Therefore, there must be norms putting limits on economic action and on markets or in other words: financial markets and the financial sector must be seen as a subsystem of society in which many different goals, norms and values exist.

Financial markets must be responsive to these other concerns, if they are integrated into the societal context. Societal norms must be directed to ensuring the coherence of the market function with the overall society and its goals and values. This is often discussed under the heading of the regulation of financial markets, but this term is misleading because financial markets are always regulated. The sociological perspective on financial markets as societal institutions emphasizes the aspect of their embeddedness into society and culture and their responsiveness to societal concerns.

Global capitalism and the hegemony of financial markets

The globalization process has transformed financial markets into globally functioning systems. The actors and participants in them nevertheless come from specific institutional and cultural contexts with different values, normative systems, and social structures. Differences concerning individual profit seeking, running into debts, demonstration of wealth etc. are based on cultural values and beliefs concerning collective vs. individualistic orientations, the meaning and strength of social ties, the observance of formal norms and so on. Moreover, there are differences of economic regimes with consequences for the meaning of enterprise, the influence of labour relations, the role of state regulation and the safeguarding function of law.

The differences between regimes and societal systems do not disappear due to the globalization process, but the power of global financial markets and of the globally operating financial institutions has increased considerably, and they can exert great pressure on firms and states. As a consequence the practice of capital market financing and investing has increased greatly, which with regard to enterprises led to a transformation from a corporate logic to an agency logic oriented at serving the goals of the shareholders (Davis, Marquis 2005; Zajac, Westphal 2004, 435). Even though, in spite of external and internal pressure to shift to market finance, many countries outside the US are rather reluctant to do so, as has been observed with regard to Japan where the preference for "relational finance" (Jackson, Miyajima 2008, 33) is rooted in the social bondage within business groups. The examples of Japan and Germany (see Dore 2006; Fiss, Zajac 2004) show that this transition did not take place everywhere to the same extent, however, the influence from the global financial markets has resulted in changes like the restructuring of organizations, altering the enterprise culture and corporate governance as well as in changes of the balance of power in industrial and labour relations and in the distribution of income and wealth.

Financial markets have turned from providing infrastructure for the real economy to taking on the dominant role over the production system and the global economy (e.g. Lütz 2005). Since this involves also pressure on the political decisions of states worldwide one can speak even of the hegemony of global financial markets. The means which the financial system uses to effectuate control are based on a system of financial indicators forcing enterprises as well as institutions of the public sector and states to comply primarily with capital interests. This process of "financialization" of the economy (e.g. Krippner 2005) has led to interpretations of a fundamental transformation of the economic and societal regime from industrial capitalism to financial market capitalism characterized by the large volume of financial transactions far outreaching the monetary value of the production of goods and services, by the transformation of assets into securities and the dependence of state finance on capital markets (e.g. Windolf 2005). Together with the revolutionary changes in the technological basis and the consequent changes in cultural techniques the great influence and power of the financial markets and the financial institutions on the global scale mark the present era as one of fundamental social transformation. But it is still difficult to say what role financial markets will play in the future. One reason for it concerns the consequences resulting from the present financial and economic crisis.

Aspects of the financial crisis

With regard to the problems of 2007/8 the rhetoric of crisis is used to signal that they came as a surprising and sudden event. Although there is ample historical evidence of recurrent economic and financial crises (see Kindleberger 1978; Ferguson 2009), their explanations are difficult because social scientific theories focus on social order and the normal functioning of the economy, and crisis disturbs and disrupts the normal state of things. Economics offers theories of cyclical changes based on the upswings and downswings inherent in market processes, but focussing on the industrial production economy. As to financial markets there had been theories like that of Hyman Minsky pointing out their instability (Minsky 2008), but the dominant view was that financial markets are always efficient (e.g. Fama 1970). Mainstream economics does not attribute the slumps and bursts to the workings of the financial markets themselves, but to factors external to the efficient market model.

One of the most popular theories attributes the inefficiency in the economy to the irrationality of individual behaviour caused by the lack of knowledge or the opportunistic greed of speculators. Akerlof and Shiller refer to the "animal spirits" which Keynes already saw at work, and specify them as "confidence, fairness, corruption and antisocial behaviour, money illusion, and stories" which are not attributed to the system, but to the vagaries of human psychology (Akerlof, Shiller 2009, 5). On the basis of the irrationality argument the authors demand a stronger engagement of the state in financial markets. They point at the economic importance of fairness and the necessity of restoring confidence which can act as a multiplier for economic performance (Akerlof, Shiller 2009, pp 14). However, in most cases the assumption of irrationality does not really hold because the behaviour of individuals is often subjectively rational enough, but has negative collective effects. People are not acting irrationally if they take the actions and reactions of others into consideration or when they observe norms and follow conventional practices.

Imitation of others which Tarde had understood as a fundamental social law (Tarde 2003/1890), equally does not constitute irrational behaviour, especially when on has to decide one's action in a situation of uncertainty, but it produces a collective dynamic which is shown in the field of diffusion of innovation. Diffusion theory provides a general social scientific theory on the dynamics of the processes that may lead to financial crisis.

Imitation and contagion play a great role in financial markets when a situation of "optimistic uncertainty" (Spotton Visano 2002, 808) arises promising great profits from investing in new technology or in new financial products. In such an environment the first movers to invest in the innovation may yield a surprisingly high profit which induces followers to imitate this behaviour, a process in which social relations and networks play a crucial role. Diffusion effects arise especially around communication on stock exchanges, where trading is done in the open; in other sectors of the financial markets the transactions are less transparent as is the case in trading derivatives or in private equity deals. But even in these cases diffusion processes are relevant because of the spreading of information within the social networks. Not only hard data are being diffused, but also stories of successful investments making some big investors like Warren Buffett or George Soros into stars of the international financial media. Grand narratives of investments in emerging sectors like the "new economy" or the "life sciences" are produced and create a climate favourable for the financial markets (see Faust, Bahnmüller 2007). Diffusion may result in contagious processes and even produce a mania creating a bubble by expanding the market volume in great measure. According to the diffusion cycle the enthusiasm recedes when asset prices rise and the process reaches a turning point where investors cannot reap the profit they expected. As the negative information of disappointed expectations diffuses, the tendency to get rid of these investments spreads, prices fall and financial markets get depressed. This may result in a panic triggered by some event dramatically constraining the liquidity in the market, leading to bank runs and bringing about the collapse of financial institutions. One would assume that diffusion effects can be observed especially among inexperienced investors. But this is not necessarily so because "What is surprising is the failure of many people to infer basic investment principles from years of experience...." (De Bondt 2005, 165). This shows that in crisis situations knowledge acquired under normal conditions does not generally prove helpful.

Another perspective for the explanation of the specific aspects of the present financial crisis is provided by a historical look at the long range development of socio-economic structure. The prolonged period of economic growth in the second half of last century in the US, in Europe, Japan and other highly industrialised countries has resulted in a rise of the disposable income of the middle classes in these societies. This, according to Deutschmann, led contrary to Keynes' assumption to the manifestation of a rentier-mentality among larger strata in the population (Deutschmann 2008, 191). However, such an attitude rests on further preconditions because the rise in disposable income as such could not produce a rentier-mentality among the middle classes without bringing about a change in habits and norms with regard to investing in securities instead of putting one's money in savings accounts. Of course, the high volume of disposable money led to low interest rates thereby discouraging conventional ways of saving. But on top of that the capital market had to be discovered by people as a means to invest profitably and safely. This presupposed the propagation of investment in financial markets as opportunities bearing little risk and by legitimizing the demand for high returns as a rational choice. This, in turn, was based on the emergence of rules and practices within the financial sector that came to spill over into the general public thereby changing expectations and attitudes.

In the case of the pension funds, it is true, the public had already invested indirectly in financial markets in the US, and there investing in shares and other securities was generally more widespread than in Europe as the phenomenon of the investment clubs shows which had existed already for some time, but expanded greatly over the last decades (Harrington 2008). Gradually, investing in securities became popular also in European countries even among people who formerly put their money only in savings accounts or invested in conservative ways. This was promoted by financial institutions bringing constantly attractive new possibilities for investment on the market and advertising them as offering high returns while bearing little or no risk.

The rise of the money volume in the financial sector and the low interest rates furthered also debt financing of consumption, purchase of housing, productive investment and public expenditure. Loans were packed and parcelled into securities and sold to investors mostly over the counter. They were thought even by experts to be insurances against risks from debts and, therefore, it seemed for many people to be the rational thing to invest in them. Many comments and studies, also within economic sociology, focussed closely on these new products and tried to understand their working. Interest was drawn before all to the derivatives based on underlying assets like futures, options and swaps; they are instruments for hedging risks, but can be used also for speculative purposes; since they are bought with credit money they have a high leverage. The securitization of assets originally consisting in loans and the great increase of debt financing of investments in stock and derivative markets are a specific feature of the recent financial crisis. But problems started to appear when debts could not be repaid. Banks had turned to lending money increasingly also to borrowers who could provide little security which was especially the case in housing finance in the US where the ideology of the ownership society induced people to buy residences they could not really afford.

Beside firms, states and individuals also banks and insurance companies, investment and pension funds, had invested in these securities and suffered huge losses in the crisis. Since they are part of the financial system they should perhaps have known better. But evidently the huge expansion of global financial markets, the size of financial institutions and the dynamics of the global flows made them unable to see the risks. By trading, investing and lending they made money for themselves in large quantities, so that they could pay their agents, the CEOs and CFOs of banks, fund managers and others huge wages and bonuses besides stock options. These, therefore, had vested interests in enlarging the profits of their financial institutions. In this course they thought up also new rules and sought channels of information and promotion on a worldwide scale leaving behind the values and concerns of the social environments they came from.

Apart from the overheating of debts and investments the present financial crisis can be seen also as an instance in a historical sequence of events like the stock market breakdown in 1987, the Asian crisis, the collapse of one of the biggest hedge funds, the Long-Term Capital Management, and the burst of the new economy bubble etc. Although they all had different reasons, this sequence of occurrences could have been read according to Boyer as signals that all was not well (Boyer 2008). The fundamental changes in the world's financial markets that followed the removal of the Bretton-Woods-System and led to the globalization of financial markets can be seen to lie at the bottom of the rise in crisis incidence. Fligstein, therefore, focused not only on the financial markets and institutions as such, but stressed the role of the state and of the political turn towards neo-liberalism and the shareholder value-principle that brought about the global dominance of the financial system (see Fligstein 1996; Fligstein 2001). The financial crisis of 2007/8 leading to a troubled period in global economic affairs, therefore, can be said to have actually started already in the 1980s by changing the political and cultural bases of the economy.

The resulting enormous expansion of the financial markets on a worldwide scale brought about a process of dissociation of the financial sector from the real economy and of its differentiation from society. The global expansion brought about worldwide networks between investors and financial institutions as well as the emergence of specific rules and norms of the financial system which emerged in the course of transactions. The financial markets became self-producing and self-legitimizing systems unconcerned with the values, norms and rules of society and consequently unresponsive to societal concerns, and thereby able to exercise one-sided pressure on states, enterprises and ultimately to the people. This view of the present crisis places it in the context of a longer historical perspective and shows the importance of re-embedding the globalized financial markets in society and economy.

Economic knowledge and the need for social knowledge

The disembedding of financial markets was not only due to its becoming dominant with regard to their influence on the real economy and their power over states and politics, but it is expressed and has been built up also by the specific kind of financial knowledge and its distribution. Financial knowledge is "performative". The concept which originally was coined in the context of the philosophy of language and taken up by economic sociology, refers to the effects of science, in this case economics, outside the scientific context. Callon has called this the "embeddedness of economic markets in economics" (Callon 1998) meaning that the theories and methods of economics have effects on the practice of business and management in the sense of producing "calculative agencies" (Callon 1998, 4). Performativity implies, however, also a close interdependence between practice and formal knowledge, because practical experiences are fed back to some extent into theory and economics education.

Economic knowledge that is produced and used in financial markets is couched in specialized language, and its central elements are quantitative indicators, creditability ratings and stock exchange analyses. The knowledge is based on economic theories, methods of accounting and calculating and on mathematicalstatistical techniques; it provides "calculative frames" that rationalize the markets (Beunza, Garud 2004) and the quantitative-mathematical form suggests objectivity, certainty or the calculability of risk and replaces trust in persons by trust in figures (Power 2007, 135). This knowledge is, however, a construction which serves the ends of the financial system, but it is unclear whether it reflects the fundamental values of the real economy or serves goals from outside the markets. The diffusion of indicators, analyses and comments are often intended to give an impression of foresight and of calculability that does not exist in reality, to produce confidence in future developments or to placate diffidence and anxiety (Kalthoff 2004, 165). They should influence investors' or creditors' risk expectations and induce enterprises to customize their structure and strategies according to the principles underlying the ratings which - as a manifestation of

the performativity of the financial knowledge - leads to gaming the system by the firms (see Faust, Bahn-müller 2007; Rona-Tas, Hiß 2008).

Financial knowledge is unevenly distributed; firstly, because people are unequally integrated into the financial system, some taking an active part in it, possessing credit cards, bank accounts, shares etc., others still remain outside the social bondage of money. People also have different levels of education. Studies linking investment decision-making with value and risk perceptions of different groups of investors showed that higher educated people in Europe express more distrust of the financial system than less educated ones (De Bondt 2005, 165). Such findings suggest that higher educational level as such results in a greater awareness of the risks of financial markets.

But financial knowledge is unevenly distributed also as a reflection of the disembedding of the financial system from the surrounding society. This is not only due to the flow-world character produced by the technical infrastructure (see Knorr-Cetina 2005), but is the manifestation of selective advantages for those who get at information at first hand and before the publication of prices, rankings and ratings. This is achieved through the use of network relations, power and long engagement in the market as professionals or investors on a large scale. As a consequence financial markets usually benefit the wealthy and those in close contact with their working, enabling them to draw up their own rules and norms hardly restricted by the surrounding social and cultural environment.

To counteract the disembeddedness of the financial sector it does not suffice to spread practical skills

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in handling money, offering financial literacy to the masses, but this must be complemented by social knowledge on all levels. Financial knowledge must encompass a consideration for the larger effects of financial markets on society and on culture; financial markets must be embedded into social contexts not only institutionally and politically, but also cognitively and culturally (Zukin, DiMaggio 1990, 14). Firstly, the actors in the market must be made to understand that the concentration on indicators and ratings and thinking up new ways to make money is not enough. The crisis was caused among other things by a lack of knowledge on behalf of the experts in the financial sector, that is, not a lack in the economic knowledge or financial expertise, but in understanding that all economic action and financial markets in particular are based on rules and norms, on values and beliefs, and function along relations that encompass much more than efficiency, and especially that financial markets are institutions that should serve society. Secondly, people should understand the function of the financial sector for the economy and for society, and see what their own position is and what their subjective social and economic situation demands. What is needed is "social literacy" that makes people able to see money and finance as part of socio-cultural life and to relate their actions to the values, norms and goals of society. Financial knowledge and financial literacy are very important for our age since the financial aspects have become so prominent in economy and society. But exactly because of this importance of the financial affairs it is necessary to embed financial knowledge into social knowledge.

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